

**From:** Salazar, Vicky  
**Sent time:** 01/29/2014 07:02:42 AM  
**To:** Soderlund, Dianne  
**Cc:** Allnutt, David; Reichgott, Christine; Holsman, Marianne; Magorrian, Matthew; Szerlog, Michael; Shaw, Hanh; Tyler, Kendra; Dunbar, Bill; Parkin, Richard  
**Subject:** AFE Itinerary and Current Briefing Documents - Confirming I have what I need  
AFE 2014 Itinerary for Dennis DRAFT 2014-1-29.docx 0 - Cumulative Combined Effects Analyses Final 1-28.docx 4 - Red Devil McLerran Jan 2014 update AFE.docx 4 - Red Devil Mine.pdf 5 - US Artic Research Commission from Marcia Combes.pdf 8 - Feb 2014 Colonel Meeting - Final RA Briefing Sheet.docx 9 -Exploration Geotech\_RA briefing paper\_revised short version.docx 11 - EA process BC 1-28-14.docx

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Hi Dianne, this is the current status of what I have for the AFE next week. There are still a few outstanding places where I am not sure if Dennis needs additional briefing documents or not. Can you please advise? Also, I note that Dennis's talk for RTOC isn't on my itinerary, can we add it?

Key places with questions are in **RED** on the itinerary.

Vicky

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Vicky Salazar  
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*Sustainability aims to "create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." - NEPA, 1969*

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**From:** Soderlund, Dianne  
**Sent:** Tuesday, January 28, 2014 2:12 PM  
**To:** Tyler, Kendra; Salazar, Vicky  
**Cc:** Allnutt, David; Reichgott, Christine; Holsman, Marianne; Magorrian, Matthew; Szerlog, Michael  
**Subject:** RE: ETPA briefing paper for Feb meeting with COE during AFE

As previously noted, a number of the topics in this summary are also pertinent to other meetings Dennis is having. ADEC and ADNR meetings will also touch on both 404 assumption, WOTUS rule, large projects and the BBWA. ADEC will also cover the wetland grant. Just wanted you to have this information as you put the book together. D

Dianne Soderlund, Director  
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**From:** Szerlog, Michael  
**Sent:** Tuesday, January 28, 2014 1:06 PM  
**To:** Tyler, Kendra; Salazar, Vicky; Holsman, Marianne; Magorrian, Matthew  
**Cc:** Allnutt, David; Soderlund, Dianne; Reichgott, Christine  
**Subject:** ETPA briefing paper for Feb meeting with COE during AFE

Kendra, Vicky, Marianne, and Matt,

Enclosed is a comprehensive briefing paper for Dennis's meeting with Colonel Lestochi next week. It covers both 404 and NEPA projects/issues. Let me know if you have any questions.

Thanks

**Michael J. Szerlog**, Manager  
Aquatic Resource Unit  
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**From:** Soderlund, Dianne

**Sent:** Wednesday, January 22, 2014 5:00 PM

**To:** Szerlog, Michael; Reichgott, Christine

**Cc:** Allnutt, David; Holsman, Marianne; Tyler, Kendra; Salazar, Vicky

**Subject:** Meeting with COE during AFE

Michael and Teena,

As you know, Dennis will be meeting with Colonel Lestochi, Major DeRocchi and Karen Kochenbach on Tuesday 2/4, in the late morning after his BBWA AFE keynote. (David and I will be in the meeting) The topics include, but are not limited to, NPR-A, Nuiqsut Road, GMT-1, Waters of US, and State 404 Authorization. I am guessing we could add Fairbanks JD and Arctic Deep Draft Port to the list. For these and any others that occur to you we should have an updated briefing for Dennis. I don't think any one of these will be a deep dive, given we have an hour scheduled, but I know the expectation is there will be some paper for each topic. Would it be possible to get these by COB next Wednesday? Thanks

Dianne Soderlund, Director

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2014 Alaska Forum on the Environment Itinerary  
Dennis McLerran – **DRAF with NOTES January 29, 2014, 7am**

<u>2/2/14 - Sunday</u>		<u>Ref Num</u>	<u>Briefing Material</u>
9:00 p.m.	Arrive Alaska via AS 109		
	Taxi to Marriott		
	General Info Briefing Docs	0	Cumulative Combined Effects Analyses Final 1-28.docx  Feb 2014 Colonel Meeting - Final RA Briefing Sheet.docx (also under 8)
<u>2/3/14 – Monday</u>			
8:30 am	Pick up Dennis from Marriott		
9:00 – 10:00 am	AOO Staff Meeting - <b>confirmed</b>		
10:15 – 11:00 am	Meet w/ Ed Fogels/Joe Balash/ @ADNR Suite 1400 - <b>confirmed</b>	1	Briefing doc needed?
11:15 – 11:45 am	Travel to AFE/Register		
11:45 – 12:15 pm	Listen to Senator Begich Remarks at AFE- <b>confirmed</b>		
12:15 – 12:45	Meet w/ Senator Begich – <b>confirmed</b>	2	Briefing doc needed?
12:45 – 1:30 pm	Lunch		
1:30 – 1:45 pm	Prep time		
1:45 – 2:00 pm	Travel to ADN		
2:00 – 3:00 pm	Meet w/ADN Editorial Board?	3	Briefing doc needed?
3:00 – 3:15 pm	Travel to AOO		
3:15 – 4:00 pm	Meet w/Bud Cribley, BLM Red Devil/NPRA GMT-1/Air MOU – <b>confirmed</b>	4	Red Devil Mine email.pdf Red Devil Mine Jan Update.pdf
4:00 – 5:00 pm	Meet w/ Cheryl Rosa @AOO – Arctic Research Commission – <b>confirmed</b>	5	US Arctic Research Commission from Marcia Combes.pdf
5:00 pm – 7:00 pm	Break @ Hotel		
7:15 pm	Dinner w/ Allnutt, Kelly,		

	Soderlund		
<u>2/4/14 – Tuesday</u>			
7:30 am	Pick up Dennis @ Marriott		
7:45 am	Arrive at Dena'ina		
8:00 – 8:45 am	AFE Keynote & PEYA Award – <b>confirmed</b>	6	Talking Points
8:45 – 9:00 am	Press availability		
9:00 – 10:15 am	Update on BBWA-McLerran/Parkin/Fordham - Tubughneng 5 – <b>confirmed</b>	7	Briefing doc needed?
10:15- 10:30 am	Travel to AOO		
10:30 – 11:30 am	Meet with COE – NPR-A/GMT-1/Nuiqsut Road/Waters of US/State 404 Authorization – <b>confirmed</b>  Col. Lestochi/Maj. DeRocchi/Kockenbach/Allnutt/Szerlog	8	Feb 2014 Colonel Meeting - Final RA Briefing Sheet.docx
11:30 – 12:15 pm	Prep Time		
12:15 – 1:00 pm	Lunch		
1:00 – 2:00 p.m.	Update/Briefing – Arctic Spill Response/ARRT/ Unified Plan/Dispersants – <b>confirmed</b>  C. Field/M. Everett/M. Combes/R. Albright	9	Exploration Geotech_RA briefing paper_revised short version.docx  Correct Briefing Doc?
2:00-2:30 pm	Break		
2:15 – 3:15 pm	Meet w/ Com. Hartig and Dep. Kent – <b>confirmed</b>	10	Briefing doc needed
3:15 – 3:30 pm	Break		
3:30-4:30 p.m.	Meet w/Environment Canada – P. Klukner/K.Woo		EA process BC 1-28-14.docx

	(ADEC also invited) - <b><i>confirmed</i></b>		
Dennis to Depart Tuesday evening for Seattle – Dianne will take him to airport.			
All meetings at AOO unless otherwise noted/D. Soderlund to attend all meetings.			

## Cumulative and Combined Effects Analyses January 28, 2014

### Cumulative Effects Analysis under NEPA

In the U.S., cumulative effects are evaluated as part of the National Environmental Policy Act (NEPA) process, which is required for nearly all major federal actions. States with NEPA-equivalent requirements for state actions also evaluate cumulative effects. Occasionally government agencies or non-governmental entities will undertake a cumulative effects analysis for a particular purpose outside of the NEPA or state-equivalent processes. Guidance for evaluating cumulative effects has been developed by the President's Council on Environmental Quality (CEQ) ("Considering Cumulative Effects under the National Environmental Policy Act", January 1997), and is followed by the lead federal agency undertaking the NEPA analysis, and is often referenced or utilized by states and other entities carrying out such evaluations.

The NEPA regulations define cumulative effects as the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions" (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively significant actions that take place over time. The CEQ guidance describes methods to identify these impacts on the human environment and focuses on the mechanics of identifying the spatial and temporal "boundaries" of the cumulative effects. Often the action agency is informed of appropriate boundaries and affected resources early in the scoping process by project stakeholders.

Cumulative impact analysis is considered an important and critical part of an environmental impact analysis because it is generally understood that most significant effects, particularly those adverse in nature, are caused by the synergistic and additive effects of many actions over time.

### Combined Effects Analysis

There are many EPA activities that do not trigger the requirements of NEPA, such as issuance water discharge permits that are not new sources. For example, on Alaska's North Slope, cumulative impacts from multiple industrial activities, particularly oil and gas, are a major concern to local residents and tribal governments. In a recent ocean discharge criteria evaluation for an Arctic oil and gas geotechnical discharge permit, EPA examined the accumulation of similar effects from other oil and gas discharge permits issued by the agency. While not a NEPA-required cumulative effects analysis, the combined effects evaluation demonstrates that the agency has considered and disclosed the potential for these impacts to occur on the receiving marine environment.

This example illustrates the opportunities and discretion available to agencies to go above and beyond statutory requirements without jeopardizing existing processes.

**Contact:** Jennifer Curtis, NEPA Reviewer, Region 10, (907) 271-6324

**Red Devil Mine**  
**January 28, 2014 Meeting/Conference Call**  
**Internal Briefing Paper Not for General Release**

**Status Update:**

- In December 2013, after several years of prompting by EPA and ADEC, BLM submitted an Engineering Evaluation/Cost Analysis (EE/CA) for a non-time critical removal action for the processing area at Red Devil Mine.
- Based on EPA's and ADEC's review, the Agencies agree with BLM's recommended alternative to pull back the bank of Red Devil Creek, thus preventing erosion of material primarily contaminated with mercury, arsenic and antimony and other metals, into the stream. This contaminated material is then transported via the creek a short distance and discharged into the Kuskokwim River where it is dispersed by the river. The Kuskokwim River has a fish consumption advisory due to mercury in fish.
- The recommended alternative will excavate approximately 5000 cubic yards of contaminated material that will be stored at temporary stockpiles within the area of contamination. At the end of the early action, the stockpiles will be covered by an impermeable synthetic cover. No soil or vegetative cap is necessary since the stockpiles are temporary. Sediment control measures will be installed to prevent the erosion of the excavated material. The stream bed will not be restored at this time. This area probably won't support much aquatic life until the Red Devil Creek is restored, which will occur after the remedial action addresses the entire processing area, likely several years from now.
- Major issues noted in EPA's review were BLM's interpretation of ARARs and the lack of clear justification for what is driving this action. BLM says they understand the issues and will revise the ARARs accordingly. Review of the EE/CA continues.
- The schedule for the early action is tight. The EE/CA should be finalized by mid February. A public comment period is projected for March. In the past BLM has used public comment meetings as the equivalent of tribal consultation. EPA uses a different process where consultation and public meetings are distinct actions. It is not clear that BLM has changed its approach.
- Following the public comment period, the Action Memo and workplan will be negotiated and approved. During this time BLM will also have to select a contractor. Since most material and equipment has to be barged to the mine site, work cannot begin until the river is open to traffic in early June. If the project stays on this schedule, the action should be completed during the 2014 field season, which ends in mid-September. For costing purposes, BLM is estimating three months of work.
- We are trying a new process for finalizing the Feasibility Study (FS). It is being revised in a piecemeal fashion. At this time, identifying the ARARs remains a major issue as well as ADEC's request to establish cleanup goals based on a cumulative risk.
- After assessing the data in the RI, the Agencies have decided to use an interim action approach to the site. The interim action is to address the contaminated soil and sediment. By addressing the main sources of contamination it is anticipated that the

contamination in the groundwater and the river sediment will become less, resulting in the need for a less robust cleanup. It will take an undetermined amount of time to accumulate the data necessary to determine what action is necessary based on the changes in the conditions at the site. At that point the final ROD will be written.

- The Remedial Design/Remedial Action (RD/RA) schedule for the interim action is very approximate. Currently the FS is projected to be finalized in early fall 2014, incorporating information gained during this year's removal action as appropriate. A Proposed Plan could then be finalized by mid spring 2015, with the public comment period held before spring breakup. The Record of Decision will be finalized in the winter of 2016. Depending on how long it takes to finalize the design, cleanup would start no sooner than 2017.

#### **Background:**

- Red Devil Mine (RDM) is an abandoned mercury mine located wholly on federally owned land on the banks of the Kuskokwim River, 250 miles west of Anchorage and 1.5 miles southeast of the Native Village of Red Devil.
- RDM is probably the largest source of mercury, both currently and historically, to the Kuskokwim River. The river is host to one of the largest native salmon runs in the world and over 15,000 people residing in Alaska Native Villages downstream of RDM rely on salmon, pike and other fish for subsistence.
- The Alaska Department of Health and Social Services has issued a restrictive fish consumption advisory for pregnant women, women of childbearing age, and children which, if followed, could limit sources of protein for subsistence fishers.

#### **Issues: (internal)**

- The Region 10 will be attending the Alaska Forum on the Environment next week and plans to discuss site status with the Regional Director of BLM, Bud Cribley as well as Larry Hartig, ADEC per December 18, 2013 email from Mathy Stanislaus to Mike Hickey and Jody M. Barringer/OMB.
- FFRRO has indicted the Regions should not work on non- NPL site. However, FFRO has indicted this Region may receive \$200K for RDM so the Region can continue its oversight work.

#### **Points of Contact:**

Matt Wilkening, RPM (208) 378-5760

Dennis Faulk, Program Manager (509) 376-8631



**Salazar, Vicky**

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**From:** Cohen, Lori  
**Sent:** Tuesday, January 28, 2014 11:24 AM  
**To:** Salazar, Vicky  
**Cc:** Wilkening, Matt; Soderlund, Dianne  
**Subject:** For RA AFE briefing book  
**Attachments:** Red Devil McLerran Jan 2014 update AFE.docx

Hi Vicky,

Dennis asked that this be included in his briefing book -this is regarding Red Devil Mine. Please print the email and attachment for him.

Thanks!  
 Lori

-----Original Message-----

From: Stanislaus, Mathy  
 Sent: Wednesday, December 18, 2013 7:02 AM  
 To: Mike Hickey; Jody M. Barringer  
 Cc: McLerran, Dennis; Cheatham, Reggie; Bertrand, Charlotte; Cohen, Lori; Karl, Richard; Fine, Ellyn; Breen, Barry  
 Subject: RDM Followup

Mike,

Thank you for taking the time to discuss the status of the Red Devil Mine site cleanup on December 11, 2013. The following summarizes our agreed upon next steps:

- 1- EPA Region 10 staff received the draft early action EE/CA document earlier this week. Region 10 will review this document and in early January, provide an update regard to how the document reflects EPA and the state's prior discussions regarding the early action options and proposed approach. Assuming we do not see major issues with the document, this will be a strong indicator that work continues to progress well on this project.
- 2- Dennis McLerran will check with Bud Cribley, BLM's Alaska Director, to ensure that BLM agrees to ensure the BLM is comfortable with our proposed path forward and that a Technical Assistance Understanding (TAU) will not be pursued at the site.
- 3- Dennis will also speak with Larry Hartig, Director, Alaska Dept of Environmental Conservation, about the RDM site during the Alaska Forum on the Environment in early February, and explain our approach to overseeing this work - that is, focusing on the work progressing at the site and his commitment with Bud Cribley to resolve any issues that arise quickly, including those raised by the state. Dennis will also ask if ADEC can speak to the AG's office as well.
- 4- Mathy will memorialize these discussions/agreements in a letter to the AG.

I hope this captures our agreements.

Thank you,  
 Mathy

## Salazar, Vicky

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**From:** Combes, Marcia  
**Sent:** Tuesday, January 28, 2014 10:53 AM  
**To:** Tyler, Kendra; Salazar, Vicky  
**Cc:** Soderlund, Dianne  
**Subject:** Briefing info for Dennis' upcoming AK trip

Hello Kendra and Vicky—

Per Dianne's request, I am sending information on the U.S. Arctic Research Commission to include in Dennis' briefing package for his pending trip to Alaska next week. Please let me know if there is anything else you need in the way of information for this particular briefing topic. Thank you!

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**U.S. Arctic Research Commission (USARC)**—An independent federal agency that advises the President and Congress on domestic and international Arctic research through recommendations and reports. There are 7 Commissioners, appointed by the President, including 4 members from academic or research institutions; two members from private industry with commercial activity in the Arctic; and one member from among the indigenous residents of the US Arctic. The Director of the National Science Foundation serves as an ex officio eighth member. Former Alaska Lt. Governor Fran Ulmer is currently the Chair of the Commission. There are also 3 Commission Staff members, including the Deputy Executive Director in Anchorage, Cheryl Rosa.

Major recommendations of the Commission on Arctic research policy, program priorities, and coordination are published in the Commission's biennial Report on Goals and Objectives for Arctic Research. The 2013-2014 report (link below) highlights the following **5 Priority Research Goals**:

- **Goal 1** Observe, Understand, and respond to Environmental Change in the Arctic
- **Goal 2** Improve Arctic Human Health
- **Goal 3** Understand Natural Resources
- **Goal 4** Advance Civil Infrastructure Research
- **Goal 5** Assess Indigenous Languages, Identities, and Cultures

There are a variety of entities in Alaska working towards improving health outcomes in rural Alaska by providing and improving water services in villages. The USARC is coordinating these groups so that this work is maximally efficient and ideas can be shared across federal, state, Alaska Native, and academic groups. The group we coordinate is called the **Alaska Rural Water and Sanitation Working Group** and their work is directly applicable to the USARC's priority goal of Improving Arctic Human Health. As part of this coordination the USARC has hosted three workshops focusing on specific water and wastewater services in villages, the fourth is scheduled for January 30, 2014. The group consists of representatives from USARC, CDC, ADEC, EPA, ANTHC and the Yukon Kuskokwim Health Corporation. Links to the previous workshops:

<http://www.arctic.gov/water-san/workshops.html>

Link to the 2013-2014 Report on Goals and Objectives for Arctic Research:

[http://www.arctic.gov/publications/goals/usarc\\_goals\\_2013-14.pdf](http://www.arctic.gov/publications/goals/usarc_goals_2013-14.pdf)

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## REGIONAL ADMINISTRATOR'S BRIEFING

*This document is used to brief Dennis on meetings with External Stakeholders. Please be sure to include any key messages that you feel Dennis should share with attendees*

**Event:** Meet & Greet with Colonel Lestochi, Alaska District, **Tuesday, February 4th**

**Duration:** 9:30 AM – 10:30 AM (AKDT)

**Location:** Alaska Operations Office

**Press (Open/Closed):** Closed

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**OVERVIEW:** Colonel Christopher D. Lestochi assumed command of the U.S. Army Corps of Engineers, Alaska District, on July 2, 2012. Col. Lestochi comes to the Alaska District from the Army War College in Carlisle, Pa. He served as Deputy Chief of the Construction Division for the Alaska District from 1998 to 2001. Col. Lestochi was commissioned in the U. S. Army Corps of Engineers in 1989 from Pennsylvania State University. He holds a Bachelor of Science in Architectural Engineering and Master of Science in Civil Engineering from Penn State, as well as Master of Strategic Studies from the U.S. Army War College.

**Attendees:** Dianne Soderlund, EPA AOO Director; David Allnutt, EPA ETPA Director; Michael Szerlog, EPA Manager (by phone); Major Mark DeRocchi; Karen Kochenbach, Corps, Chief of the Regulatory Division; Terri Stinnett-Herczeg, Corps, Deputy Chief.

### **Key Messages:**

1. EPA values its relationship with the Alaska District and has worked hard over the years to build and improve our interactions. Over the past year we have been communicating often on CWA §404 projects. In addition, the co-location of the Corps and EPA staff in Juneau and the placement of Department of Army interns at EPA under detail are a great example of the strength of our relationship.
2. There are large projects in Alaska that require frequent communication and coordination. EPA's CWA §404 staff routinely serve as associate reviewers under NEPA and strive to understand, from a CWA §404 perspective, the issues early on for these large projects. Early involvement and continued communication is essential in managing these projects, which are extremely sensitive and can become politicized.
3. Addressing issues involving Compensatory Mitigation is one of the top priorities for both Region 10 and the Alaska District Regulatory staff and management in FY14. We have made great strides with the development and implementation of the Statewide Interagency Review Team (SIRT), but there is still much work to be done. The joint training offered in May and the possibility of using Conflict Prevention and Resolution Center money to communicate about mitigation needs for the authorization of the Placer Mining General Permit are examples of this continued commitment.

## Key Issues/Projects:

**Compensatory Mitigation improvements a FY14 focus by EPA and Corps:** Both agencies have been working closely together this past year to improve the state of compensatory mitigation in Alaska. Below are some examples:

1. **Statewide Interagency Review Team implementation** The Alaska District convened a Statewide Interagency Review Team (SIRT) in the fall of 2013. The SIRT is chaired by the District and includes EPA, FWS, NMFS, NRCS, ADNR, ADEC, and ADF&G. The formal “*Roles and Responsibilities Agreement*” was signed by all of the agencies. The purpose of the SIRT is to foster training and develop tools for implementation of the 2008 Final Mitigation Rule so as to achieve greater consistency in the development of compensatory mitigation banks and in-lieu fee (ILF) programs in Alaska.

It is hoped that the development of District-wide tools, templates, and procedures by the SIRT will lead not only to greater consistency, but also to better environmental outcomes and greater predictability for the regulated community. The Regulatory Guidance Letter (RGL) 09-01 is the District’s only guidance document pertaining to compensatory mitigation. The regulated community has expressed concerns about inconsistent compensatory mitigation requirements. Having a consistent mitigation framework would provide greater clarity to applicants and likely shorten permit process times.

Additionally, the SIRT could develop frameworks for functional assessment and for determining debits and credits for compensatory mitigation. We have explored a number of possibilities to support the development of a functional assessment tool, perhaps beginning with a pilot project on the North Slope.

Status: The SIRT has held 3 meetings since being convened in the fall of 2013. Managers from the State and Federal agencies will meet February 5, 2014 to receive a status report on SIRT progress thus far.

2. **Corps/EPA sponsored compensatory mitigation training:** The SIRT agencies identified training for staff that participates on IRTs as a high priority. To address this need, the SIRT will bring an IRT training course to Anchorage the week of May 12, 2014. The course will be patterned after the national course held annually at the National Conservation Training Center (NCTC) in Shepherdstown, West Virginia. The principle trainers will be Steve Martin from the Corps’ Institute for water Resources (IWR) and Palmer Hough of EPA’s Office of Water.
3. **Need for functional assessment methodology and interim approach:** Inconsistencies in how the impacts of proposed projects are evaluated and how compensatory mitigation ratios are determined adds controversy to the review of

large projects in Alaska. The Corps and applicants are greatly hampered by the lack of peer reviewed or even consensus-based tools for performing functional assessments. RGL 09-01 allows assessment based on Best Professional Judgment (BPJ). Currently, if functional assessments are performed (which is not universally true) consultants develop them with little or no interaction with agency experts. As such, these efforts are expensive to perform and often have very questionable validity for the appropriate assessment of function, condition, and services performed by given wetland systems.

EPA believes that tools need to be developed to provide for a consistent basis for functional assessments in Alaska. Some tools are available in different regions, but nothing is available for the North Slope, where many of the 404 actions with the most significant impacts are proposed to be placed in pristine, fully intact permafrost wetlands. Toward this end, we suggest that the SIRT or other interagency group work to develop a consensus based (and hopefully, peer-reviewed) portfolio of tools for use in Alaska for rapidly calculating comparative levels of wetland functions/services and/or the evaluation of wetland condition.

EPA proposes that the agencies begin with a pilot effort on the North Slope. The 2011 National Wetland Condition Assessment collected data from approximately 40 randomly selected sites of non impacted, and an additional group of targeted degraded wetland sites within the NPR-A. We have also applied for GRO (Greater Research Opportunity) funding for a fellowship to fund a student to perform a literature search and compilation of literature on the functions and services of Arctic tundra wetlands. EPA believes that if the Corps is willing, and the agencies can commit to the effort, a functional assessment technique which incorporates identified functions in a meaningful model which is based on Arctic wetlands as reference. The data sets can be used to test and validate the models developed. The development of such techniques would provide greater certainty to the applicants in the permit process, and would provide a consistent, more scientific standard for evaluating appropriate mitigation.

4. **Possible Conflict Prevention and Resolution Center funding** to discuss compensatory mitigation options for the reauthorization of the Placer Mining Regional General Permit. EPA is submitting a request to CPRC to use some leftover FY13 funds to bring professional facilitators to work with Corps, EPA, BLM, State, and other agency staff in the discussion of ways to integrate compensatory mitigation into the Placer Mining RGP. The State of Alaska has expressed an interest, as part of their review of CWA §404 Assumption, to help administer this RGP. Ensuring that it meets the intent of the 2008 compensatory mitigation rule should be a high priority.

### **Outstanding CWA §404(q) Actions**

1. **Douglas Harbor Dredging Project**: The applicant, the City and Borough of Juneau (CBJ), for the project located in the Douglas Small Boat Harbor in Juneau,

Alaska, stated in the public notice that "[t]he applicant's stated purpose is to renovate the existing Douglas Harbor in order to meet changing moorage demand in Juneau." CBJ's proposal includes dredging approximately 30,000 cubic yards of material from the Harbor. The proposed dredged material disposal site is in Gastineau Channel, and the proposed dredged material disposal method is unconfined open water disposal via barge.

Impacts: The environmental concerns raised by EPA relate to elevated methyl mercury concentrations found in the sediments at the proposed dredge site. EPA is concerned about potential bioaccumulation of methyl mercury in the benthic environment of Gastineau Channel.

Status: The Civil Works side of the Corps awarded a contract to private consulting firm to develop a cap design and analysis on behalf of the City and Borough of Juneau. The Corps Regulatory met in November with EPA, Corps Civil Works and their contractor to go over scope and details of the plan to address EPA's concerns. EPA is waiting for CBJ to revise its permit application so that we can determine whether to end the 404(q) dispute resolution process.

2. **Nuiqsut Spur Road Project:** Kuukpik Corporation, the village corporation for Nuiqsut, proposes to build a 5.8 mile road and gravel storage pad from the Village of Nuiqsut to the junction of the CD-5 road which was permitted by the Corps following a controversial permit review. The storage pad would house an exploration camp, which would be run by Kuukpik, and would provide gravel and equipment storage. The applicant proposes to preserve 76.5 acres as compensation for the impacts of the fill.

Impacts: The proposed project would result in the discharge of 51 acres of fill for the road and storage pad. The fill would occur in a pristine area of the tundra, just outside the Colville River Delta (part would occur in a riverine complex that drains to the Colville River). The approximately 11-acre storage pad is proposed to be adjacent to the soon-to-be-built CD-5 road. The applicant has addressed some of our initial concerns but the mitigation for the direct losses, which is proposed to be preservation of 76.5 acres of tidal/coastal wetlands on Fish Creek, approximately 14 miles from the project site, is insufficient to offset the impacts. There is also no mitigation proposed for the indirect effects of the fill, which include fragmentation and degradation of wetlands surrounding the road from dust spray and dust shadow. The CD-5 permit, which is adjacent to where this road joins the CD-5 road, required a 3:1 preservation ratio for the same kinds of wetlands/condition of wetlands that this project proposes to impact, and 10% of the agreed-upon ratio to be applied to the footprint of the dust shadow. Applying the same method of calculating credits required to offset direct and indirect impacts that was applied in the CD-5

permit decision would amount to approximately 245 acres of preservation required for the Nuiqsut spur road project.

Status: On September 16, 2013, Region 10 sent the Alaska District of the Corps a letter (known as a “3(b) letter”) that formally committed the agencies to a dispute resolution process. A number of discussions involving the Corps, EPA, and Kuukpik staff have ensued. The 3(b) letter requires the Corps to submit any draft proposed final permit to EPA for review. The Corps has stated that it is close to making a decision, but we have not been informed of their position on compensatory mitigation. Recent discussions with a representative of the Kuukpik Corporation indication that Kuukpik may be willing to accept greater mitigation ratios (thus removing EPA’s final objection to the permit) and work with EPA and the Corps to establish a mitigation bank for the North Slope. This would be a very positive resolution to this dispute.

### Large-Scale NEPA/404 Projects

1. **Deep Draft Port Feasibility Study/EIS**-Proposal by Corps Water Resources for a deep draft port and/or at Nome and/or Port Spencer on the Seward Peninsula to support emergency response and economic development. Project involves 309, 404, Ocean Dumping and emergency response. EPA has forwarded a draft Cooperating Agency MOU to the Corps for their review. We expect that it will be signed within the next week or so. In the interim we are working closely with the Corps, meeting biweekly or more often if needed. Currently the Corps anticipates publishing the Notice of Availability for the Draft EIS in early March. The Corps has committed to providing us early review of the document when it is submitted to the editor. The Corps has provided the economic analysis and hydraulic engineering report to EPA for review and input. EPA’s anticipated MPRSA action is de-designation of current disposal sites (Nome East and West). Corps can do temporary designation under their 103 authority for a period of 5 years, with a 5 year extension if need for disposal is identified (not anticipated by the Corps). Ocean Dumping program has determined that this action does not merit voluntary NEPA compliance. Primary 309 concern is that although an extensive process has been followed to identify these two alternatives, will the final alternatives represent the required reasonable range of alternatives for a NEPA analysis. Study/EIS is also on a “fast track” under the Corps’ “SMART Planning” process.
2. **BLM Greater Mooses Tooth-1** Supplemental EIS and Conoco Phillips Alaska 404 permit application-This proposal, (formerly known as CD-6), is for the first development project within the National Petroleum Reserve-Alaska. Conoco Phillips is proposing a 7.8 mile road from CD-5 to the GMT-1 drill site, a single 11.8 acre pad for 8 to 33 wells, 8.4 miles of elevated pipelines, two bridge crossings of streams, and associated support infrastructure. The project was



previously analyzed under the BLM Alpine Satellites EIS in 2004. Since then, Conoco Phillips has further reduced the footprint and repositioned the pad, resulting in less fill. Draft Supplemental EIS and 404 Public Notice are expected in early February.

3. **Juneau Access Transportation Improvements Project:** Project is to improve surface transportation between Juneau, Haines and Skagway (increase traffic volume & frequency, decrease travel time). ADOT and FHWA have initiated a second supplemental EIS to update project alternatives (in response to court decision requiring stand-alone alternative for improved Alaska Marine Highway System assets) and cost estimates; further evaluate project impacts and mitigation measures; and identify Alternative 2B (East Lynn Canal Hwy to Katzechin with shuttles to Haines and Skagway) as its preferred alternative. EPA and the Corps are cooperating agencies and recently received the PDSEIS for a 30-day review. ADOT has applied for a new permit (Corps determined previously approved permit was no longer valid) for Alternative 2B. DSEIS is expected this spring. Current concerns include compliance with the 2008 Final Compensatory Mitigation Rule as well as inadequate analysis of impacts in original EIS and first supplemental EIS, particularly for impacts to Berner's Bay. EPA rated both original Draft EIS and first Draft SEIS EO-2, although Final SEIS did address most of our concerns. We also sent 3(a), 3(b), and 3(d) letters to the Corps on the Public Notice issued with the Supplemental EIS.

Project History: In 1997- DEIS. EPA rates DEIS as "EO-2" based on aquatic impacts and poor analysis; in 2005- SDEIS. EPA rates SDEIS as "EO-2" for similar reasons; in 2006- FEIS & ROD. FHWA decides to build Alternative 2B. Corps issues 404 public notice. **EPA sends Corps 3(a) & 3(b) letters.** 2 interagency meetings held to discuss EPA's comments; and in 2007, 2008- Corps works with ADOT, FHWA & EPA to address EPA's comments and **EPA sends Corps 3(d) letter.**

Impacts: Previously the proposal was for several hundred acres of aquatic resources including direct impacts within the Tongass National Forest and secondary impacts near Berners Bay and the Katzechin River Delta. The current information lists 61 acres of wetlands and 32 acres inter- and subtidal, and 5.7 acres in Berners Bay "sub-region".

Status: PDSEIS for Cooperating Agency review expected January 2014 with a DSEIS expected February 2014.

4. **The Susitna-Watana Hydroelectric Project** would involve construction of a dam on the Susitna River at river mile 184, approximately halfway between Anchorage and Fairbanks. The 735-foot high dam would be the second tallest in the U.S. and would create a reservoir 42 miles long and up to 2 miles wide. Installed capacity would be 600 MW, with the average annual generation projected to be 2800 GW-hrs. Load-following operation (i.e., releasing water

from the reservoir synchronous with electricity demand) is proposed. The project proponent, Alaska Energy Authority (AEA), has described the project as scalable up to an 880-foot high dam.

Impacts: The proposed project would alter the physical, chemical, and biological characteristics of the Susitna River from the area of impoundment to the River's mouth at Cook Inlet. In order to generate electricity during the winter, the project would convert approximately 40 river miles of the main stem of the Susitna River and 15 miles of tributary streams from riverine to reservoir environment. An estimated 10 miles of river would alternate between riverine and reservoir habitat. An estimated 20,000 acres of habitat would be flooded, and the reservoir would impede traditional migration routes of caribou and other wildlife. The storage of summer flows for release in the winter would alter the river's hydrology, as well as water temperature and chemistry. Peak summer discharges will be reduced and delayed by an average of two months, and winter flows would increase by four or five times. The daily flow fluctuations associated with load-following would contrast completely with the existing stable winter flows. Flow fluctuations would also alter ice processes on the river and impact use of the river corridor for navigation during both winter and summer. The reservoir would trap virtually all upstream sediment and wood, resulting in changes to the river's pattern, dimension, and profile downstream of the project. These physical changes will alter the aquatic and riparian habitats available for fish and wildlife. The dam will block sixty miles of Chinook habitat.

Status: FERC will be preparing an EIS for the project. EPA, the Corps and USDA Rural Utilities Service intend to be NEPA Cooperating Agencies. AEA is on the verge of submitting its Initial Study Report (ISR) summarizing the results of the studies conducted during 2013. AEA has requested a 120-day extension of time to submit the ISR; and FERC will issue a decision on the request prior to February 3.

The project was recently dealt a blow when Governor Parnell's proposed budget funded the project at 10%. The Governor is seen as the chief patron of the project. He explained that further funding for the project would be contingent on AEA securing access to land at the proposed dam site and within the reservoir inundation zone. The lands in question are owned by Alaska regional and village corporations.

On January 28, 2014, FERC responded to AEA's request. FERC granted AEA's request to postpone submission of the ISR by 120 days until June 3, 2014. FERC also provided the same additional 120 days to the stakeholder review of the ISR. The new date for the ISR meeting is October 16, 2014. AEA did not request additional stakeholder review

time, but multiple stakeholders did request the additional time in comments they filed in response to AEA's request.

4. **Chuitna Coal Mine:** PacRim's proposed surface coal mine is located on the west side of Cook Inlet near the Native Village of Tyonek (NVT) and the community of Beluga, approximately 45 miles west of Anchorage. The project would extract low sulfur sub-bituminous coal from the Beluga Coal Field for a minimum 25-year life of the mine, with a production rate of up to 12 million tons per year for export. It would be largest coal mine in Alaska's history.

**Impacts:** Project documents indicate that the mining operation would result in the direct loss of approximately 4,000 acres of wetlands, 200 acres of lakes and ponds, and nearly 100 linear miles of headwater stream channels, 11 miles of which are known to support anadromous fish. The proposed mine's dewatering effluent, which would not meet current water quality standards for several metals, could be discharged to the surface or to Cook Inlet.

**Status:** EPA had previously developed an EIS for development of this mine. The Corps is currently supplementing the EIS. The 404 PN will be issued concurrently with the draft Supplemental EIS (SEIS). The expected timeframe is late 2014. EPA has reviewed and commented on several preliminary draft sections of the SEIS, including the proposed action, alternatives, and the Corps' proposed approach for the cumulative impacts analysis. EPA has received responses to those comments, but has yet to receive updated drafts. EPA is currently reviewing the updated wetlands functional assessment report. The Corps continues to work with NVT, the State Historic Preservation Office, PacRim, and the Advisory Council on Historic Preservation to address potential impacts to cultural resources identified in the project area. The Corps is currently revisiting the Purpose and Need Statement for the SEIS, and continues to work with PacRim to identify alternatives to the proposed action for consideration in the SEIS. EPA has asked to be involved in those discussions. The Corps is working with the State Surface Coal Mining Program, PacRim, and the Alaska Mental Health Trust (land owner) to determine the post-mining land use for the project area. The selected post-mining land use will be a significant factor in determining mitigation and restoration options post-mining. EPA has asked to be involved in those discussions. EPA and the Native Village of Tyonek—IRA Council (NVT—IRA Council) entered into a Memorandum of Understanding (MOU) in late 2012 for the purpose of maintaining effective consultation and coordination between the EPA and the NVT—IRA Council regarding the proposed Chuitna Coal Project.

5. **Donlin Gold Mine Project:** The proposed Donlin Gold Mine is located on the Yukon-Kuskokwim Delta in southwest Alaska, approximately 120 miles upstream from Bethel. The large gold deposit is on lands owned by the Kuskokwim Village Corporation (surface) and Calista Regional Corporation (subsurface). The proposal is for a two square mile open pit mine. The waste rock would include naturally

occurring mercury and arsenic. Besides the pit, the project would include a waste rock facility, tailing storage facility, overburden stockpiles, fuel storage tanks, power generation facility, water treatment facility, sewage treatment facility, utility corridors, operations camp, and various ancillary facilities, as well as a 5,000-foot gravel airstrip, a port site on the Kuskokwim River, and an all-season access road from the port site to the mine. A 313-mile long, 14-inch diameter buried pipeline would transport natural gas from Cook Inlet (Beluga) to supply the power generation facility.

Impacts: The total temporary and permanent surface impacts exceed 16,000 acres, of which approximately 42% (nearly 7,000 acres) are wetlands. The project would also directly impact approximately 75 linear miles of streams.

Status: On October 19, 2012, Region 10 agreed to be a cooperating agency on the development of the EIS. The EPA has signed a Memorandum of Understanding with the Corps, along with the BLM, USFWS, PHMSA, the State of Alaska, and seven Tribal Government to clarify roles and responsibilities, despite concerns with certain provisions, such as retention of experts, limited participation by Tribes, and participation on workgroups. The public scoping period concluded at the end of March 2013. The cooperating agencies have been working with the Corps on identifying data gaps/needs, completing review of draft Chapter 1 (Purpose and Need) and review of draft Chapter 2 (Alternatives). The Corps is evaluating adjustments to the EIS schedule to accommodate requests by the cooperating agencies.

EPA's Bristol Bay Watershed Assessment: The objective of the assessment is to use the best available science to assess the potential impacts of large scale mining on the Kvichak and Nushagak River drainages.

Background: Nine Bristol Bay Tribes, other tribal organizations and many groups and individuals, who were concerned about the proposed Pebble Mine, asked EPA to use our authority under Section 404(c)\* of the Clean Water Act (CWA). Two Bristol Bay Tribes, other tribal organizations, the Governor, and a few others including Pebble Limited Partnership asked us to let the standard NEPA/CWA §404 review process proceed. After carefully considering all of the requests, EPA decided to conduct a watershed assessment to provide a scientific basis for any future decisions. (\*Section 404(c) authorizes EPA to restrict, prohibit, deny, or withdraw the use of an area as a disposal site for dredged or fill material if the discharge will have unacceptable adverse effects on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas). The Final Assessment was released on January 15, 2014.

Preliminary Results/Peer Review:

- The assessment concluded that even a modern mine that is constructed and operated in accordance with its permit will have a negative effect on the salmon fishery and associated wildlife and tribal culture. A failure of part

of the mining infrastructure, such as a tailings dam, has a lower probability of occurrence but higher consequences.

- The assessment has been peer reviewed by 12 independently selected scientists. We have received the final report from the peer reviewers but have not made it available to the public yet. The response to comments summary is expected to be released shortly.
- About 237,000 public comments were received on the first draft, and 890,00 on the second draft. The vast majority of the input received does not support large-scale mining in Bristol Bay. Public interest remains very high.
- The assessment is not a decision document. It will be used to inform any potential future actions by the Agency.

Status:

- The EPA Bristol Bay watershed assessment is available online at [www.epa.gov/bristolbay](http://www.epa.gov/bristolbay).
- Once the response to comments has been published and made available to the public, the watershed assessment process will be complete. EPA has been pressed, and will likely continue to be pressed, to initiate 404(c) proceedings on the area. EPA looks forward to the continuing exchange of information and discussions with the Corps.

### CWA 404 Assumption and Wetland Program Development Grant

**CWA 404 Assumption:** The Alaska legislature authorized the state Departments of Environmental Conservation and Natural Resources to investigate the possibility of assuming the 404 program and provided funding for several positions to work on that investigation.

**Background:** Under the CWA, a state or tribe seeking to administer a Section 404 program must submit a request for assumption to the EPA and demonstrate that their program meets the requirements of CWA Section 404(h) and its implementing regulations. This includes a requirement that the state or tribe's program: (1) has the authority to issue permits consistent with and no less stringent than the Act and implementing regulations, including the Section 404(b)(1) Guidelines; (2) has an equivalent scope of jurisdiction for those waters they may assume; (3) regulates at least the same activities as the federal program; (4) provides for public participation; and, (5) has adequate enforcement authority.

Once the EPA approves a Section 404 program, the state or tribe assumes all responsibility for the Section 404 permitting program under its jurisdiction, determines what areas and activities are regulated, processes individual permits or general permits for specific proposed activities, and carries out compliance and enforcement activities. By statute and regulation, the EPA has a general oversight responsibility of the state or tribal program including, for example, reviewing

draft permits for which review has not been waived. The EPA reviews approximately one to two percent of the Section 404 permits issued by Michigan and New Jersey.

The EPA provides support to states and tribes that want to assume the Section 404 program by engaging a state or tribe when it expresses an interest in assumption, remaining engaged during development of the assumption package, and reviewing program applications consistent with the CWA and implementing regulations. Moreover, the EPA continues to play a critical oversight role if and when a state/tribal program has been approved.

Status: The state is nearing completion of its hiring and has begun investigating issues such as which waters are assumable and what the workload would be. They are also engaging in extensive outreach, so far primarily to industry groups, but now also at the AFE.

**Wetland Program Plan (WPP) development by ADEC under our Wetland Program Development Grant.** ADEC was awarded a wetland program development grant by EPA, to write a wetland program plan over two years, as a part of the State of Alaska's efforts to assume Clean Water Act Section 404 permitting. ADEC's goal is to develop a comprehensive WPP.

Status: The state completed a WPP outline and a WPP presentation was in December 2013. They plan to hold a state wetlands work group meeting in January 2014 followed by a State wetlands program development workshop in April 2014. Their goal is to develop a Draft WPP by June 2014 and submit to EPA by Sept 2014.

### **Clean Water Act Jurisdiction**

1. **WOTUS Proposed Rule:** Corps and EPA HQ are poised to publish a proposed rule to update and clarify the definition of waters of the U.S. (WOTUS) that are subject to Clean Water Act regulation. The target for publication is reportedly mid-February. HQ has not yet shared the proposed rule with the regions (due to describe it to us on 29 January), but a leaked version is based heavily on an extensive synthesis of the scientific rationale for jurisdiction over various types of waters. Among other things, the proposed rule would clarify that all tributaries and all adjacent waters are jurisdictional, clarify the definition of adjacency, and clarify which waters are *not* jurisdictional. Together with the science synthesis, the proposed rule formally adjusts the WOTUS definition in light of *SWANCC* and *Rapanos*, U.S. Supreme Court rulings that limited jurisdiction to waters that have a significant nexus to traditionally navigable waters. Existing exemptions related to agriculture and ditches remain the same.
2. **Reversal of Fairbanks Jurisdictional Determinations:** Following remand on administrative appeals, the Corps Alaska District has reversed two originally positive jurisdictional determinations (JDs) in the Fairbanks area, based on

uncertainty about the effect of a 2010 Alaska District Court case known as *Great Northwest*. The JDs involve a very large wetland crossed by a road; *Great Northwest* brought into question the effect of such linear fills on jurisdiction. The Region brought the case to the attention of EPA and Corps headquarters, who are currently engaged in discussions. The agencies agree that linear fills should not sever jurisdiction; at issue is how best to reconcile that position with *Great Northwest*.

**Aquatic Resource Unit Contacts:** Michael Szerlog, Manager, Aquatic Resources Unit (ARU); Mary Anne Thiesing, Wetland Coordinator and Regional Wetland Ecologist. **Alaska Operations Office ARU Staff:** Matthew LaCroix, Mark Jen, and Gayle Martin; **Seattle ARU Staff working on AK issues:** Heather Dean, Becky Fauver, and Chan Pongkhamsing.

**RA/DRA Briefing Paper**  
**Exploration and Geotechnical NPDES General Permits in the Arctic**  
**January 27, 2014**

Purpose: Status update on the Geotechnical GP, exploration activity, and workload implications

Bottom-Line Issues:

- Exploration in the Chukchi Sea in 2014 by Shell is not likely due to the recent 9<sup>th</sup> Circuit Court's finding that BOEM's SEIS is flawed.
- It is not yet clear whether this development will affect Shell's plans for geotechnical work.
- Exploration in the Beaufort Sea in 2014 was not planned due to lack of available equipment that would allow Shell to meet the terms of the Conflict Avoidance Agreement with the Alaska Eskimo Whaling Commission.

Status of the Geotechnical NPDES General Permit:

- The draft permit was released for a 66-day public comment period on November 22, 2013; public meetings, tribal consultations, and hearings were held January 6-10, 2014.
- In response to requests from AEWC and the Inupiat Community of the Arctic Slope, EPA extended the comment period to February 19.

Overview of Concerns re: Geotechnical GP:

- Tribal and local leaders and subsistence commissions have expressed concerns that:
  - Only zero discharge is acceptable.
  - The permit should go farther to protect ocean resources, mammals, and whale hunting.
  - Industry self-monitoring provisions are not acceptable.
  - Agencies are not showing respect for the land and sea or listening to the communities; joint workshops with other federal agencies should be scheduled.
- Shell has expressed concerns that:
  - The draft permit's data collection requirements will interfere with development plans.
  - Permit requirements that increase time in the field may result in greater impacts.
  - Environmental monitoring requirements and timing restrictions are overly stringent compared to potential impacts and lack a reasonable basis.
  - Inconsistencies between EPA and DEC permits affect Shell's ability to operate efficiently.

Timing and Work Load Considerations:

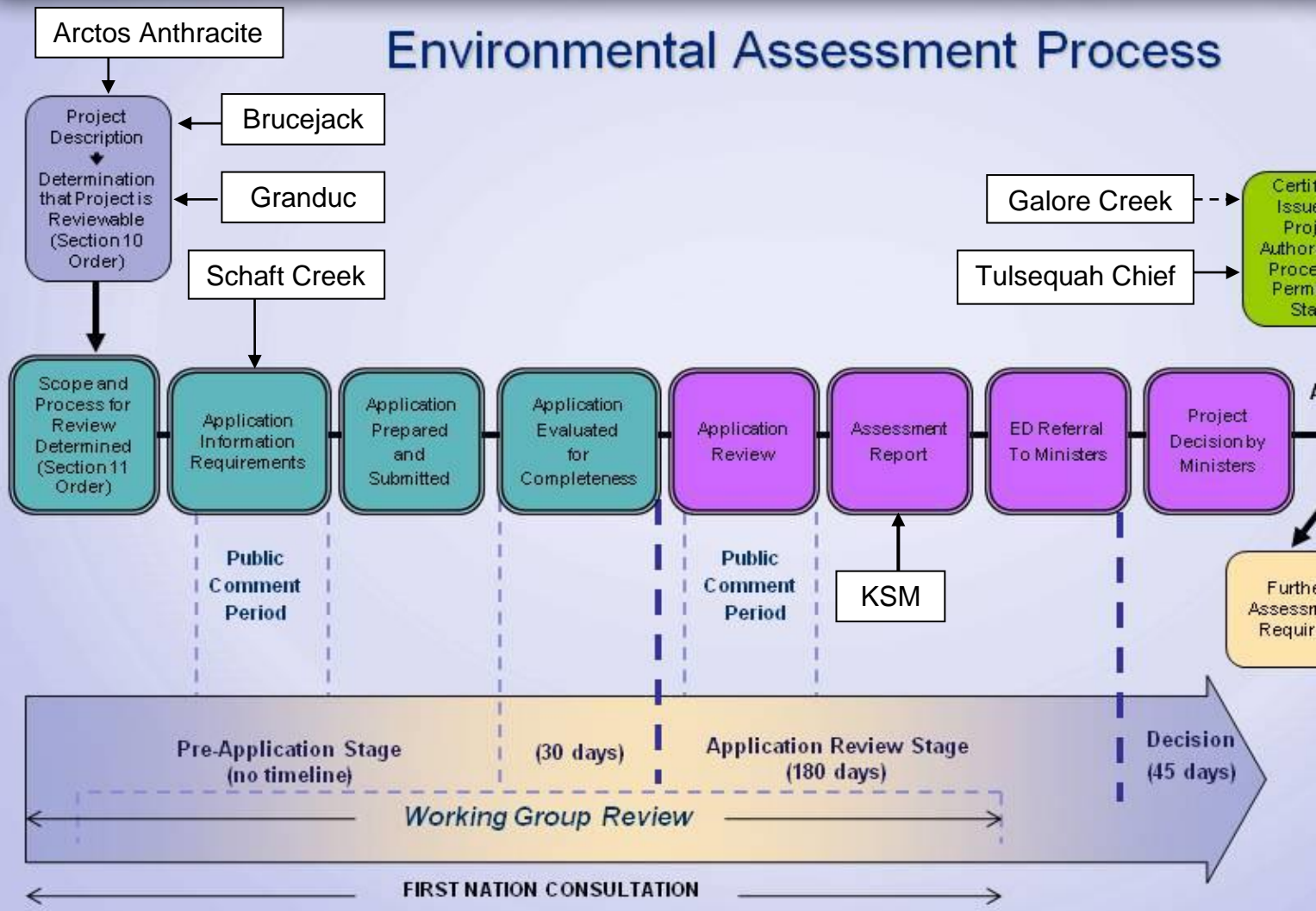
- Based on a February 19 comment deadline, it may be difficult to issue a final permit by June 1 and have an effective permit by July 1, the start of the open-water construction period.
- Shell's activities may thus be delayed until later in the season, which lasts until October 31.
- The Ninth Circuit appeal of the Beaufort and Chukchi exploration general permits is underway. Petitioner's opening brief is due March 21; EPA's reply is due April 21. This schedule overlaps with responding to comments and finalizing the Geotech permit and ODCE.
- Petitioners may renew their FOIA request for internal agency records for which they were previously denied a fee waiver. If this occurs, significant staff resources will be needed to review 2500+ documents during essentially the same time frame.



# Environmental Assessment Office



## Environmental Assessment Process



KSM (Seabridge): The Application for an EA Certificate was submitted to the British Columbia Environmental Assessment Office (BC EAO) and the Canadian Environmental Assessment Agency (CEAA) in August 2013. EPA provided comments on the application in November 2013 and on Seabridge responses in January 2014. The next step is for EAO to refer the project to the Ministers for a decision on certification.

BruceJack (Pretivm Resources): Commenced an underground exploration program and the feasibility study is expected to be completed in the second quarter of 2013 (<http://www.pretivm.com/Projects/Bruce-Jack/Overview/default.aspx>). In late December, Pretivm submitted the project description for Brucejack to the BC EAO to initiate the permitting process (<http://www.petroleumnews.com/mnarch/07-02-3.html> [accessed 1/11/13])

Galore (Novagold/Teck): NovaGold received construction permits in June 2007 based on a 2006 feasibility study for the project, and during 2007 made significant progress on the access road, bridges and tunnel. In November 2007, NovaGold and Teck suspended construction activities at Galore Creek during a period of increasing capital costs. ([http://www.novagold.com/upload/our-responsibilities/GaloreCreekProject\\_IR2010.pdf](http://www.novagold.com/upload/our-responsibilities/GaloreCreekProject_IR2010.pdf)) The Pre-Feasibility Study was completed 2012 as well as some additional engineering. Novagold and Teck chose not to move forward with the Feasibility Study or permitting for now (personal communication, Ron Rimelman, Novagold)

Schaft Creek (CopperFox Metals): A feasibility study completed at the end of 2012 outlines plans for a conventional open pit mine at Schaft Creek with a mill rate of 130,000 metric tons per day for a minimum 21-year mine life based the deposit's proven and probable mineral reserves of 940.8 million tons containing 5.6 billion pounds of copper, 5.7 million ounces of gold, 363.5 million lbs of molybdenum and 51.7 million oz of silver. Copper Fox continued to move the joint Schaft Creek Mine Project Environmental Assessment Application and Environmental Impact Statement forward through the pre-application stage of the environmental assessment process during the past quarter (2Q – 2013). In July 2013, Copper Fox Metals Inc. and Teck Resources Ltd. came to an agreement for a partnership to further the exploration and development of Schaft Creek (<http://www.petroleumnews.com/mnarch/07-29-1.html> accessed 7/29/13).

Tulsequah: Chieftain released its Feasibility Study on December 12, 2012. A new 128 kilometer long, Forestry approved 5m wide road will be constructed from Atlin, BC, the mine site. The concentrates are anticipated to be trucked to the Skagway terminal facility in Alaska. The road passes through Taku River Tlingit First Nation land, and they and the Children of the Taku now oppose the mine's development. Chieftain mothballed the \$9 million water treatment plant in June 2012 to improve the facility's efficiency while it acquires additional funding. Chieftain partnered with a subsidiary of China-based CMAC Engineering. Recently, Chieftain said testing would begin for eventual restart of the treatment facility. Project construction is expected to commence in the Spring of 2013, subject to project financing (<http://juneauempire.com/local/2012-12-26/chieftain-releases-feasibility-study> [accessed 1/11/13] and December 12, 2012 press release).

Granduc: April 24, 2013 - Castle Resources Inc. granted stock options and filed the Preliminary Economic Assessment ([http://www.infomine.com/index/properties/Granduc\\_Project.html](http://www.infomine.com/index/properties/Granduc_Project.html))

Arctos Anthracite Joint Venture: proposes to develop and operate a new open pit coal mine in northwestern BC, approximately 90 km southeast of Iskut. The proposed Project would have a production capacity of approximately 8,200 tonnes per day of clean coal, and a mine footprint of about 4,000 ha, including an open pit of about 730 ha. The mine would produce about 3 million tonnes of coal per year for about 25 years. Transportation of the coal would be by rail to Ridley Terminals in Prince Rupert. The proposed Project would also include the construction of 147 km of rail line from the proposed mine site to the terminus of the existing railway. The proposed Project is located in the watershed of Didene Creek, a headwater tributary of the Spatsizi River, which is a tributary of the Stikine River.

*All websites accessed January 10, 2013, unless otherwise noted.*